IDAHO
DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

RAPID RIVER HATCHERY

Annual Report

1 October 1982 - 30 September 1983

by

Thomas G.. Levendofske
Fish Hatchery Superintendent III

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RAPID RIVER HATCHERY

ABSTRACT

During March-April, 1983, approximately 3 million spring chinook smolts from 1981 brood were planted into Rapid River. An additional 250,000 1981 brood smolts were planted directly below Hells Canyon Dam on the Snake River.

At the beginning of the fish year, approximately 6.7 million eggs *were* on hand from adults spawned in August and September, 1982. Approximately 493,000 additional eggs from the 1982 brood year had previously been shipped green to Lookingglass Hatchery, Oregon. In the following month 1.8 million eyed eggs were shipped to other hatcheries, leaving nearly 4.4 million to be ponded as fingerlings in May-June, 1983. These will be available for smolt plants in Rapid River and at Hells Canyon Dam in the spring of 1984.

Net production from this hatchery during the fish year totaled 159,746 pounds (72,447 kg). We fed 215,413 pounds (97,692 kg) of Oregon Moist Pellet feed for a total cost of $114,929.22. The resulting feed conversion was 1.35:1.

The adult trapping facility was operated from 13 April through 8 September 1983. Fish classified as spring chinook, totaling 1,958, entered the trap facility from 22 May through 1 August 1983. An additional 86 summer run chinook were classified until the trap was taken out of operation on 8 September. The run peak this year occurred during the last week of June, in which nearly 800 fish were counted. Other incidental fish species included steelhead and Dolly Varden. No rough fish were observed this year.

This year's spring chinook run totaling 1,958 was comprised of 820 males, 1,044 females and 94 jacks. Age-class composition showed 94 three-year old spring chinook (jacks-5%), 838 four-year-old spring chinook (43%) and 1,026 five-year-old spring chinook (52%). Again this season, due to the low run count, all chinook adults were held for spawning. The Rapid River chinook run made up approximately 3.4% of the Bonneville Dam count and 19.5% of the Lower Granite Dam count.

All chinook arriving at the trap facility *were* measured and examined for injuries. Various injuries occurred on 15% of the run (293 fish) and were listed as follows: nitrogen blisters (157), gaff wounds (6), gillnet (24) and other wounds (106). The number of fish classified as "trap mortalities" totaled only 15 this season. Throughout the entire trapping, holding and spawning season, 105 males and 182 females were classified as pre-spawning mortalities (15.4% of the adult count).

This season, an attempt was made to trap adult chinook at Hells Canyon Dam. This had minimal success with only 12 adults being transported to Rapid River Hatchery. Two of these fish were females,

in which one died prior to spawning. These fish were transported to Rapid River Hatchery on 18 July. Two of these fish were noted to have nitrogen blisters.

All spring chinook, including jacks, were administered drug injections of water soluable erythromycin as they arrived at the trap facility. Mortalities throughout the season were examined and only six of these fish were found to have KD lesions, indicating that erythromycin may still be a valuable chemical.

Spawntaking operations commenced on 8 August and were completed on 9 September 1983. During this time, 859 females were spawned to produce approximately 3.4 million eggs. Each female averaged 4,015 eggs at nearly 91 per ounce in size, with an eye-up success of 87% for the season. All eggs this year were again water-hardened in a 2 ppm solution of erythromycin. No surplus eggs were available for distribution this season from Rapid River Hatchery.

Author:

Thomas G. Levendofske
Fish Hatchery Superintendent III

OBJECTIVES

1. To report all project functions of Rapid River Hatchery occurring during the fish year.

2. To evaluate brood year returns of spring chinook salmon and inventory other fish species.

3. To report the distribution of eggs and juvenile spring chinook salmon.

4. To report improvements and project recommendations for the operation of Rapid River Hatchery.

INTRODUCTION

Rapid River Hatchery is located seven miles southwest of Riggins, Idaho in Idaho County. This facility was constructed in the early 60's and is owned by Idaho Power Company. The annual operation of this hatchery is funded by Idaho Power Company, as part of mitigation requirements for losses of spring chinook salmon in the Hells Canyon area of the Snake River. This hatchery produces approximately three million juvenile spring chinook salmon annually for smolt plants in Rapid River and Hells Canyon.

In past years this hatchery has produced fingerling chinook for Red River pond and various other locations throughout Idaho. Surplus eggs, when available, have also been utilized by many other projects. The water source for all functions of this hatchery is Rapid River, a tributary to the Little Salmon River.

This hatchery project utilizes an adult trapping facility, several adult holding ponds, 2 earth rearing ponds and 12 concrete raceways. Hatchery buildings include an incubator building with 50 Heath, double-stacked incubators, an office-shop complex, public restrooms, 3 permanent employee residences and a 3-bedroom mobilehome for temporary employee housing.

Spring Chinook Salmon Smolts - 1981 Brood Year

Enumeration of Downstream Migrants

Smolt plants in Rapid River, from the 1981 brood year, totaled approximately 2,998,103 during the fish year. These fish averaged 118 millimeters in length and 22 per pound (48.5/kg).

Smolt migration from the hatchery appeared to start during the last week of March and a final pond flush was made on 18 April. In addition

to this total, approximately 250,020 smolts from the '81 brood year were transported to Hells Canyon Dam and released on 18 and 19 March 1983.

Coded-wire tagged smolts from '81 brood, totaling approximately 85,500, were included in the Hells Canyon release. All of these were also branded. The Rapid River release smolts contained approximately 26,500 smolts with brands, but no coded-wire tags. Specific tagging data is listed in this report under Special Studies.

Rearing Problems - Diseases and Treatments Used.

Fish losses during the year due to disease were minimal, although we did experience some minor problems with bacterial gill disease. Due to the quick detection of this problem we were able to avoid an epidemic situation with daily treatments of Cutrine, Copper Control and B.C.

Feed Conversion Rates

Net production from this hatchery during the fish year totaled 159,746 pounds (72,447 kg). 215,413 pounds of Oregon Moist Pellet feed was used at a total cost of $114,929.22. We used strictly the O.M.P-IV diet this year which produced a feed conversion of 1.35.1.

Spring Chinook Salmon Juveniles - 1982 Brood Year

Enumeration

On 1 October 1982, approximately 6,789,750 eggs were on hand in incubators at Rapid River Hatchery. These originated from Rapid River adults spawned 14 August-September, 1982. Green eggs totaling 493,346 and eyed eggs totaling 1,832,083 from this brood year group were transferred to other projects leaving a total of nearly 4.4 million fry to be started on feed in the raceways. Water temperature during incubation and early rearing ranged from 35°F (1.7°C) to 43°F (6.1°C). During May and June, the resulting fingerlings were transferred to the rearing ponds. This year, fish were ponded between the size range of 300 to 400 per pound.

Rearing Problems - Diseases and Treatments Used

Mortality losses on the 1982 brood year juveniles were virtually non-existent during the fish year, mainly attributed to the use of O.M.P.-IV for initial rearing. Kidney disease was detected early on this group while fish were still in the raceways, but we experienced no mortalities. After ponding, this fish group was given a 21-day prophylactic treatment of erythromycin medicated feed. Fish

amples prior to ponding and again in mid-September were sent to worshak National Lab for F.A.T. analysis. This sampling showed the rythromycin treatment to be very beneficial for preventing fish losses ue to bacterial kidney disease. Specific data concerning the B.K.D. roject is available upon request.

pring Chinook Salmon Adults - Returns to Rapid River. 1983

Enumeration

Spring chinook salmon totaling 1,958 entered the trap facility from 2 May through 1 August 1983. This year's run peak occurred during the ast week of June, in which nearly 800 fish were observed.

The 1,958 run total was comprised of 820 males, 1,044 females and 4 jacks. Age-class composition of the run showed 94 three-year-old pring chinook (5%), 838 four-year-old spring chinook (43%) and 1,026 ive-year-old spring chinook (52%). Age-class composition was etermined by lengths and coded-wire tag recovery data.

The Rapid River chinook run, this season, made up approximately .4% of the Bonneville Dam count and 19.5% of the Lower Granite Dam ount.

Observations of Injuries

Nearly 15% of this year's chinook run (293 fish) was observed at he trap facility having various injuries. These were listed as ollows: incidence of nitrogen blisters (157 fish), gaff wounds (6 ish), gillnet (24 fish) and other wounds (106 fish). These injuries ere treated at the trap facility with a direct application of alachite green solution. It is unknown to what extent these injuries ave on the overall pre-spawning mortality at this hatchery, however, t is probably significant.

Marked Returns - Coded-wire Tag Data

All chinook entering the Rapid River trap were examined for tags nd marks. Jaw tag numbers were recorded and all adipose fin-clipped ish were dart tagged to aid recapture at spawning time. Snouts, otaling 39, were sent to the Lewiston Lab at the end of the spawning eason for tag recovery. A total of only 23 of these snouts were found o contain tags.

Tag analysis data was available from three smolt release groups this ear. Four tags from data code group 102236 were recovered epresenting vibrio-vaccinated fish from the '81 release in Rapid River. Six tags from data code 102237 were recovered representing the control group" from the vibrio vaccination project on smolts, also

from the '81 release in Rapid River. Eight tags from data code 102238, representing the "normal" smolt group from the '81 release in Rapid River and five tags from data code 102114 representing '80 "normal" release were also recovered.

Additional information concerning coded-wire tag recoveries is listed in Table 1 of this report.

Prespawning Mortality - Treatment of Adults

Prespawning losses, including 15 trap mortalities, totaled 105 males and 182 females (15.4% of the adult count). Losses due to kidney disease were virtually non-existent with only six adults having KD lesions. All chinook, including jacks, were administered a sub-cutaneous injection of water soluable erythromycin solution, at the rate of 5 mg per pound of fish body weight. Only one adult showed symptoms of jaundice this season.

Mortality losses due to fungus were again non-existent at this hatchery. Adequate fungus control was provided with the use of malachite green flushes every other day, at the rate of one ppm throughout the holding and spawning season.

Spawntaking and Enumeration of Eggs

Spawntaking started on 8 August and was completed on 9 September 1983. During the time, 859 females were spawned to produce approximately 3,449,471 eggs. This included eggs from one adult transported from the Idaho Power Company, Hells Canyon Trap. Each female averaged 4,015 eggs, at nearly 91 per ounce in size.

All eggs taken this year were water-hardened in a two ppm solution of erythromycin. Eggs were then placed in Heath incubators and developed to "eye-up" at an average rate of 87%.

Distribution of Eggs

There were no excess eggs available for other projects this season due to the below normal egg take at Rapid River Hatchery. All eggs, nearly 3.4 million, were kept at this facility and eyed up at an average rate of 87%.

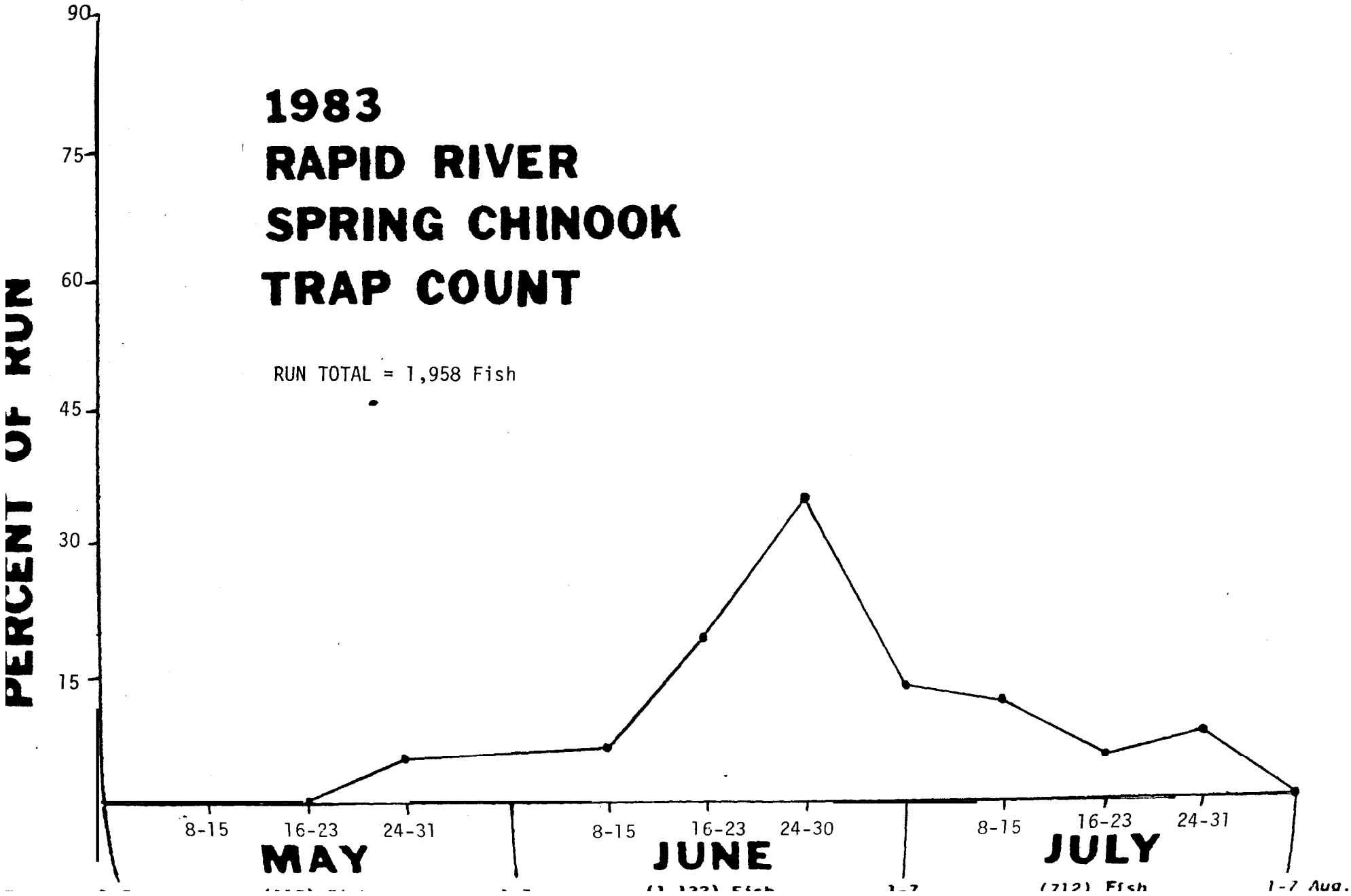
Disposition of Carcasses

All injected, nonsalvageable, carcasses totaling nearly 1,900 were stored in a mobile freezer unit to later be given to an animal by-product salvage company. Salvageable carcasses, totaling 60, were given to the Nez Perce Tribal Council this year.

able 1. Numbers and lengths of coded-wire tag returns to Rapid River Hatchery, 1983.

Fork length Cm	In.	3-Yr. Olds '80 Brood '82 Release Data Code 102414	102415	4-Yr. Olds '79 Brood '81 Release Data Code 102236	102237	102238	5-Yr. Olds '78 Brood '80 Release Data Code 102114
8.3	19						1
0.8	20						
3.3	21						
5.9	22						
8.4	23						
0.9	24						
3.5	25						
6.0	26						
8.6	27				1	1	
1.1	28					1	
3.7	29			2	2	3	
6.2	30			1	1	2	
8.7	31			1	1	1	
1.3	32				1		
3.8	33						1
6.4	34						
8.9	35						2
1.4	36						
4.0	37						
6.5+	38+						1
	Totals	0	0	4	6	8	5

Figure 1. Weekly arrival numbers - 1983 spring chinook returns.



INVENTORY OF MISCELLANEOUS SPECIES

ring Chinook Adults - Hells Canyon Stock

An attempt was made this season to trap chinook adults at the Idaho wer Company's Hells Canyon trap. A total of 12 adults, of which two ere females, were transported to Rapid River Hatchery on 18 July. ese fish were then injected with erythromycin and held for spawning. o males and one female from this group died prior to spawning.

mmer Chinook Adults

Chinook salmon, totaling 86, were classified as summer run from 29 ly through 19 August 1983. These fish were examined for marks, etc. d returned to Rapid River to spawn.

eelhead Adults

During April and May 1983, a total of 78 steelhead adults were amined at the trap facility and released back into Rapid River to awn.

lly Varden

During the time the Rapid River trap was in operation, a total of 23 Dolly Varden were counted and released. Again this year, their ize varied to a maximum length of approximately 18 Inches (457 mm). few more larger fish were observed this season than in previous years.

her Species

In addition to the species listed above, incidental numbers of uvenile rainbow or steelhead were also observed. No cutthroat, hitefish or rough fish were recorded this season.

SPECIAL STUDIES

ded-Wire Tagging

During the week of 7 March through 14 March 1983 the tagging crew rked approximately **85,654** pre-smolts from '81 brood, With an adipose n-clip, brand and coded-wire tag. This number was comprised of

of 42,508 fish with data code 102318 and 43,143 with data code 102717. Both groups were also freeze-branded with a RD(T) Pos. 3. These fish were held until 18 and 19 March i„ raceways, at which time they were transported and planted directly below Hells Canyon Dam on the Snake River. These fish averaged 27 per pound and 112 mm in length at the time of release. Actual total planting figures were listed as 85,500.

In addition, 26,606 pre-smolts from '81 brood were freeze-branded with a RD (12) Pos. 1 during the same week and released directly into Rapid River. These fish contained no tags and averaged 23 per pound, 117 mm in length at the time of release near 1 April 1983. Actual planting figures on this group were listed as 26,500.

HATCHERY IMPROVEMENTS AND MAINTENANCE

Major modification at the trap facility was completed this season with the addition of new concrete canals to and from the adult holding area. Gabian rip-rap was also installed above and below the velocity barrier to prevent high water erosion problems. A new crowder rack and sand pump was also installed at this facility.

A real asset to this hatchery was the addition of a 14'x70', three bedroom mobile home, to be used by temporary employees throughout the summer months. Concrete steps were poured for this unit, and in the future, skirting and sidewalk will be added.

Other accomplishments this year included construction of labroom cabinets, a new steel gate to our materials storage area, miscellaneous painting and some minor grounds improvement. Carpeting was also installed in the residences.

MISCELLANEOUS ACTIVITIES

During the year approximately 3,200 people visited Rapid River Hatchery. School groups again made up a portion of this total.

Other activities this season included participation in hunter safety classes, enforcement check stations and fish tagging at Dworshak National Hatchery. Personnel from this hatchery were also responsible for spawntaking operations at Red River Pond.

RECOMMENDATIONS

Many improvements have been made at Rapid River Hatchery in the past year to modernize this project. We are greatly appreciative to Idaho Power Company for these improvements. Currently, plans are being made to replace the headgate screening system with a new self-cleaning

tructure. Also, a new mobile fish feeder is scheduled for purchase, hich will greatly improve fish feeding.

Some items for future consideration include modification of the ncubation water system and the construction of power-driven screens or the pond outlets. Budgeting procedures still need to be reviewed nd adult holding and spawning areas could be improved. Also, a larger torage building would facilitate housing of the fish pump, small pumps nd trailers, dam boards and screens and other miscellaneous equipment.

ACKNOWLEDGEMENTS

The crew at Rapid River Hatchery would Iike to express their ppreciation for assistance given during the year by the following eople: Rodney Duke, Jim McLin, Idaho Department of Fish and Game nforcement personnel, Larry Wimer and staff and the Idaho Power ompany maintenance crew.

Hatchery staffing during the year included: Thomas G. Levendofske, ish Hatchery Superintendent III; Thomas L. Rogers, Fish Hatchery uperintendent I; John R. Thorpe, Fish Hatchery Superintendent I; Jim cLin, Fish Hatchery Superintendent I; Jerry McGehee, Fish Culturist; orky Davis, Todd Garlie and Sally Rau, Bio-Aides; Ross Clay, Laborer nd Ken Partridge, CETA worker.

APPENDICES

Appendix 1. Returns of spring chinook salmon to Rapid River Hatchery, survival to spawning, and enumeration of eggs, 1965-1983.

Return year	Snake R. returns (adults)	Rapid R. returns (adults)	Rapid R. (Jacks)	Prespawning mortality percentage	Number of females spawned	Number of eggs per female	Number of eggs taken
1965	408			21%	133	4,541	604,000
1966	1,511			18%	621	3,697	2,296,000
1967	974		1,039	11%	581	3,537	2,055,000
1968	351	3,416	740	2%	1,809	3,671	6,540,000
1969	672	2,817	1,043	8%	1,415	3,655	5,151,697
1970		6,470	887	10%	3,520	4,136	14,560,280
1971		3,357	1,754	19%	1,722	3,507	6,038,785
1972		12,310	943	15%	3,825	3,941	15,072,604
1973		17,054	286	37%	3,454	3,912	13,510,465
1974		3,457	538	27%	1,756	3,924	6,890,186
1975		4,428	573	7%	2,184	3,894	8,503,606
1976		6,342	1,765	15%	3,055	3,762	11,492,878
1977		7,767	437	11%	3,781	3,745	14,160,330
1978		5,735	34	21%	2,350	4,266	10,026,888
1979		3,054	350	31%	1,141	4,950	5,648,722
1980		1,528	432	30%	543	3,235	1,756,827
1981		3,087	176	7%	1,666	3,675	6,122,273
1982		3,646	30	11%	1,883	3,973	7,482,330
1983		1,864	94	15%	859	4,015	3,449,471

*In recent years, prespawning mortality included any female mortality prior to spawning and all male mortality up to two weeks after the beginning of egg taking operations.

Appendix II. Summary of spring chinook adults to Rapid River by brood year.

Brood year	Year released	Number released	3 yr olds	Year returned	4 yr olds	Year returned	5 yr olds	Year returned	Total brood year return
1964	1966	588,000	1,039	1967	3,422	1968	197	1969	4,658
1965	1966-67	480,000	740	1968	2,620	1969	874	1970	4,234
1966	1968	1,460,000	1,043	1969	5,596	1970	364	1971	7,003
1967	1969	900,000	887	1970	2,992	1971	1,544	1972	5,416
1968	1970	3,172,000	1,754	1971	10,766	1972	4,403	1973	16,923
1969	1971	2,718,700	943	1972	12,654	1973	1,759	1974	15,356
1970	1972	2,809,200	285	1973	1,698	1974	386	1975	2,370
1971	1973	2,908,42	538	1974	4,206	1975	1,120	1976	5,864
1972	1974	2,707,91	573	1975	5,222	1976	634	1977	6,429
1973	1975	3,373,70	1,765	1976	7,110	1977	1,845	1978	10,720
1974	1976	3,358,940	437	1977	3,890	1978	2,413	1979	6,740
1975	1977	3,170,922	34	1978	598	1979	46	1980	678
1976	1978	2,413,678	350	1979	1,482	1980	146	1981	1,978
1977	1979	2,866,99	432	1980	3,068	1981	557	1982	4,057
1978	1980	2,811,593	176	1981	3,089	1982	1,026	1983	4,291
1979	1981	2,520,045	30	1982	838	1983		1984	
1980	1982	1,473,73	94	1983		1984		1985	
1981	1983	2,998,103		1984		1985		1986	

Appendix III. Summary of eggs, fingerlings and smolts planted from Rapid River Hatchery, 1964-1983.

1964 Brood:	887,000	eggs taken. No eggs, fingerlings, or smolts planted or transferred.
	580,000	smolts released into Rapid River, 1966. 22.6/lb.
1965 Brood:	604,000	eggs taken. No eggs, fingerlings, or smolts planted or transferred.
	480,000	smolts released into Rapid River, 1967. 23.2/lb.
1966 Brood:	2,296,000	eggs taken. No eggs, fingerlings or smolts planted or transferred.
	1,460,000	smolts released into Rapid River, 1967. 25.0/lb.
1967 Brood:	2,055,000	eggs taken. No eggs, fingerlings, or smolts planted or transferred.
	900,000	smolts released into Rapid River, 1969. 24.0/lb.
1968 Brood:	6,540,000	eggs taken.
	757,376	eyed eggs shipped to Clearwater River drainage hatching channels. No fingerlings or smolts planted or transferred. Nearly 2,000,000 smolt-sized fish were lost to Kidney Disease
	3,172,000	smolts released into Rapid River, 1970. 20.0/lb.
1969 Brood:	5,171,697	eggs taken.
	497,000	eyed eggs shipped to Dworshak Nat'l Hatchery to start Kooskia Nat'l Hatchery.
	4,300,000	eggs kept at Rapid No fingerlings planted or transferred, 1970.
	2,718,720	smolts released into Rapid River, 1971. 21.0/lb.

1970 Brood:	14,560,280	eggs taken
	4,417,454	green eggs shipped to Sweetwater Eyeing Station for Clearwater reintroduction.
	2,214,119	green eggs shipped to Kooskia Nat'l Hatchery.
	526,516	green eggs shipped to Hayden Creek Hatchery.
	2,473,983	eyed eggs shipped to Clearwater River drainage hatching channels.
	9,642,072	eggs shipped.
	4,607,736	eggs kept at Rapid River.
Fingerling plants, 1971:	200,520	planted in the Lemhi River.
	353,970	planted in Decker Pond.
	100,000	transferred to Sandpoint Hatchery.
	654,584	fingerlings planted or transferred.
Smolts Planted, 1972:	91,800	planted in the Lochsa River.
	2,809,200	released into Rapid River. 19.4/lb.
1971 Brood:	6,038,785	eggs taken.
	600,496	eyed eggs shipped to Hayden Creek Hatchery.
	5,438,289	eggs kept at Rapid River.
Fingerling Plants, 1972:	53,562	planted in the Lemhi River.
	104,300	planted in Red River.
	29,800	planted in Ten Mile Creek (Clearwater).
	44,700	planted in American River.
	14,900	planted in Papoose Creek
	59,600	planted in Brushy Creek.
	44,700	planted in Fish Creek.
	14,900	planted in Post Office Creek.

Fingerling Plants, 1972: (con't)	44,700	planted in Squaw Creek (Lochsa).
	61,500	planted in Lochsa River.
	60,000	planted in Ten Mile Creek (Clearwater).
	200,880	transferred to Sandpoint Hatchery.
	174,300	transferred to Decker Pond.
	74,700	transferred to Decker Pond.
	152,305	transferred to Decker Pond.
	1,134,847	total fingerlings planted or transferred.
Smolt Plants, 1973:	197,303	planted in the South Fork of the Clearwater River drainage.
	2,908,425	released into Rapid River. 17.0/lb.
1972 Brood:	15,072,604	eggs taken.
	5,256,662	green eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).
	1,881,024	green shipped to Hayden Creek Hatchery.
	1,131,334	eyed eggs shipped to Hayden Creek Hatchery.
	1,293,592	eyed eggs shipped to Red River Hatching Channel.
	9,562,612	total shipped.
	4,878,017	eggs kept at Rapid River.
Fingerling Plants, 1973:	None.	
Smolt Plants, 1974:	None.	
	2,707,917	released into Rapid River. 17.511b.
1973 Brood:	13,510,464	eggs taken.
	3,915,900	green eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).
	1,295,424	green eggs shipped to Hayden Creek Hatchery.
	104,760	green eggs shipped to Hagerman Hatchery.
	502,200	eyed eggs shipped to Crooked River Hatching Channel.

Appendix III. Continued.

1973 Brood (con't):	702,000	eyed eggs shipped to Kooskia National Hatchery.
	806,400	eyed eggs shipped to Hayden Creek Hatchery.
	504,000	eyed eggs shipped to Minnesota for walleye trade.
	7,830,684	total eggs shipped.
	5,302,677	eggs kept at Rapid River.
Fingerling Plants, 1974:	210,734	transferred to Sandpoint Hatchery.
	206,360	transferred to Kooskia National Hatchery.
	36,400	planted in Ten Mile Creek.
	52,080	planted in Ten Mile Creek.
	18,200	planted in Newsome Creek.
	633,000	planted in the Lemhi River.
	10,428	planted in Capehorn Creek.
	1,167,202	total fingerlings planted or transferred.
Smolt Plants, 1975:	117,000	planted in the S.F. of the Clearwater River.
	3,373,700	released into Rapid River. 14.8/lb.
1974 Brood:	6,890,186	eggs taken.
	809,400	eyed eggs shipped to Hayden Creek Hatchery.
	407,012	eyed eggs shipped to Indian Creek Hatching Channel.
	1,216,412	total eggs shipped.
	5,203,276	eggs kept at Rapid River.
Fingerling Plants, 1975:	203,500	transferred to Sandpoint Hatchery.
	21,840	p l a in Capehorn Creek.
	59,962	p l a in Red River.
	30,750	plant in Newsome Creek.
	10,250	p l a in Ten Mile Creek.
	1,140,300	plant in the Lemhi River.
	1,466,602	Fingerlings planted or transferred.
Smolt plants, 1976:	205,700	planted in the S.F. of the Clearwater River.
		released into Rapid River. 18.4/lb.

Appendix III. Continued.

1975 Brood:	8,503,606	eggs taken.
	2,363,200	green eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).
	252,200	eyed eggs shipped to Mullan Hatchery.
	255,000	eyed eggs shipped to Hayden Creek Hatchery.
	280,65	eyed eggs shipped to Indian Creek Hatching Channel.
	3,151,059	eggs shipped.
	4,906,492	kept at Rapid River.
Fingerling Plants, 1976:		
	34,000	planted in Ten Mile Creek.
	156,000	planted in the Lemhi River.
	65,960	planted in the S.F. of the Clearwater River.
	206,400	planted in Decker Pond.
	206,400	planted in Decker Pond.
	209,950	transferred to Sandpoint Hatchery.
	36.143	planted in Bear Valley Creek (upper Hayden Creek drainage).
	914,844	total fingerlings planted or transferred.
Smolt Plants, 1977:	249,750	planted in the S.F. of the Clearwater River.
	3,170,922	released into Rapid River. 15.9/lb.
1976 Brood:	11,492,87	eggs taken.
	1,161,608	green eggs shipped to Mullan Hatchery.
	2,937,994	green eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).

Appendix Ill. Continued.

1976 Brood (con't):	261,900	eyed eggs shipped to Hayden Creek Hatchery.
	261,900	eyed eggs shipped to Sandpoint Hatchery.
	1,267,208	eyed eggs shipped to Mackay Hatchery.
	6,344,610	total eggs shipped.
	5,009,482	kept at Rapid River.
Fingerling Plants, 1977:	47,008	shipped to the University of Idaho, Fisheries Co-op Unit.
	311,850	shipped to Mackay Hatchery.
	104,500	planted in Lolo Creek.
	501,600	transferred to Red River Pond.
	80,600	planted in the S.F. of the Clearwater River.
	1,045,558	fingerlings planted or transferred.
Smolt Plants, 1978:	None planted.	
	2,413,678	released into Rapid River. 15.7/lb.
1977 Brood:	-14,160,330	eggs taken.
	2,633,400	Green eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).
	2,287,800	green eggs shipped to Kooskia Nat'l Hatchery.
	2,439,000	green eggs shipped to Mullan Hatchery.
	250,200	eyed eggs shipped to Mullen Hatchery.
	288,000	eyed eggs shipped to Hayden Creek Hatchery.
	20,700	eyed eggs shipped to the University of Idaho.
	1,007,340	eyed eggs shipped to the Crooked River Hatching Channel.
	8,926,440	total eggs shipped.
	5,098,587	eqgs kept at Rapid River.

Fingerling Plants,	723,000	transferred to Mackay Hatchery.
	50,800	transferred to Decker Pond.
	200,025	transferred to Red River Pond.
	265,600	planted in the Lemhi River.
	1,239,425	total fingerlings transferred or planted.
Smolts Planted, 1979:	44,373	planted in Newsome Creek.
	156,362	planted in White Sands Creek.
	200,735	total smolts planted.
	3,018,448	released into Rapid River. 15.0/lb.
1978 Brood:	10,026,888	eggs taken.
	767,322	green eggs shipped to Hayden Creek Hatchery.
	970,728	green eggs shipped to Mackay Hatchery (500,000 eyed eggs to be shipped to Oregon).
	1,540,282	Green eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).
	706,936	green eggs "shipped to Dworshak Nat'l Hatchery.
	38,160	eyed eggs shipped to the University of Idaho.
	10,864	eyed eggs shipped to the University of Idaho (Hayden Creek).
	1,250,010	eyed eggs shipped to the Crooked River Hatching Channel.
	249,969	Eyed eggs shipped to Sweetwater Eyeing Station (Clearwater reintroduction).
	5,534,271	total eggs shipped.
	4,219,846	eggs kept at Rapid River.

Appendix III. Continued.

Fingerling Plants, 1979:	232,500	transferred to Red River Pond.
	10,000	planted in Ten Mile Creek.
	242,500	total fingerlings planted or transferred.
Smolts Planted, 1980:	157,440	planted in White Sands Creek.
	2,811,593	released into Rapid River. 15.0/lb.
1979 Brood:	5,646,722	eggs taken.
	806,400	eyed eggs shipped to Hayden Creek Hatchery.
	330,880	eyed eggs shipped to Dworshak Nat'l Hatchery.
	1,137,280	total eggs shipped.
	4,511,442	eggs kept at Rapid River.
Fingerling Plants, 1980:	293,240	planted in Red River Pond.
Smolt Plants, 1981:	1,001,700	planted in the Snake River at Hells Canyon Dam. 21.0/lb.
	2,375,715	released into Rapid River. 17.9/lb.
	3,377,415	total smolts planted or released.
1980 Brood:	1,756,827	eggs taken.
		no eggs shipped.
Fingerling Plants, 1981:	None.	
	1,473,733	released into Rapid River.

1981 Brood:	6,122,273	eggs taken.
	608,384	eyed eggs shipped to Pahsimeroi Hatchery.
	256,608	eyed eggs shipped to Oxbow Hatchery (Oregon).
	449,280	eyed eggs shipped to Dworshak Nat'l Hatchery.
	1,314,272	total eggs shipped.
	4,409,036	eggs kept at Rapid River.
Fingerling Plants, 1982:	None.	
Smolt Plants, 1983:	2,998,103	released into Rapid River. 22/lb.
	250,020	planted in the Snake River at Hells Canyon Dam. 27/lb.
	3,248,123	total smolts planted or released.
1982 Brood:	7,420,450	eggs taken.
	493,346	green eggs shipped to Lookingglass Hatchery These were later shipped to Dworshak National Hatchery.
	1,332,000	eyed eggs shipped to Pahsimeroi Hatchery.
	375,028	eyed eggs shipped to Dworshak National Hatchery.
	125,055	eyed eggs shipped to Hagerman National Hatchery.
	2,325,429	total eggs shipped.
	4,614,863	eggs kept at Rapid River.
Fingerling Plants,1983:	306,000	transferred to Red River Pond. 255.0/lb.
Smolt Plants, 1984:		
1983 Brood:	3,449,471	eggs taken and kept at Rapid River Hatchery.
	Due to the	low number of eggs this year, no egg shipments were made to other projects.